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FEB 25 2002

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/853,544

DATE: 02/12/2002

TIME: 15:31:19

Input Set : A:\10624-051.txt

Output Set: N:\CRF3\02122002\I853544.raw

ENTERED

3 <110> APPLICANT: Barbosa, et al
 5 <120> TITLE OF INVENTION: Markers for Evaluating Estrogenic Activity
 7 <130> FILE REFERENCE: 10624-051
 9 <140> CURRENT APPLICATION NUMBER: 09/853,544
 10 <141> CURRENT FILING DATE: 2001-05-10
 12 <160> NUMBER OF SEQ ID NOS: 19
 14 <170> SOFTWARE: PatentIn version 3.0
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 555
 18 <212> TYPE: DNA
 19 <213> ORGANISM: Homo Sapiens
 21 <220> FEATURE:
 22 <221> NAME/KEY: modified_base
 23 <222> LOCATION: (1)..(555)
 24 <223> OTHER INFORMATION: n = a, c, g or t
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 30 aggccagtgt ccaggctgca ttcagttcac agaactgtcc tcaggacgtt gcatggaact 120
 32 ggaaatgtgt ataattacag aagaaaacag ggaggactta gtgcagagag gagacgagtg 180
 34 tggacgggca acagcatcct tagtctttca tatttatata tggatatatg attttctata 240
 36 tatatatatta tatattttac atccagggtat ccagtcacatc tgtaccattt ccaggggaga 300
 38 catgggtgct tccaaggcga gacaggaaag ggtaggcag ggaaggggca gcgacgggtg 360
 40 aggtcggggc ttggctcaca gaagctgcag gagcttcagc agctgtaaga gggccccggg 420
 42 ctccgcagac gccagggtact gagnaacaagc cagtcctcca gctccacgcc ccgcctgcga 480
 44 tccaccgcct tctccgcaaa cttcatcacc atcaggcccc gcttcattgt gatccagttg 540
 46 tgcagcgtgc gcaca 555
 49 <210> SEQ ID NO: 2
 50 <211> LENGTH: 923
 51 <212> TYPE: DNA
 52 <213> ORGANISM: Homo Sapiens
 54 <220> FEATURE:
 55 <221> NAME/KEY: modified_base
 56 <222> LOCATION: (1)..(923)
 57 <223> OTHER INFORMATION: n = a, c, g or t
 60 <400> SEQUENCE: 2
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 63 tttgattcac ccccttcctt cctctccctt tctttcccat tgctacata aaggagtcag 120
 65 ggctgtgtcc accaatatgc tctgtgacta gcagtcacaa caatttcata ccagccagtg 180
 W--> 67 cattccggag natttgggat gataatgttc ccattctcag ttctctctgtg agaatgtgna 240
 69 tgtcatttga agctctgtgc ctcagtttcc atagaagtaa aacaaaaagc aagaattgag 300
 W--> 71 actgatcttt tncctgnaag aattcacang taatggataa tgtacaagag atgtggctga 360
 W--> 73 ataagagaac tagaacaang acttgaacaa tttncctatg caacactctt tcccatggac 420
 W--> 75 aaaggtatcc cacaaagtca tncctcatcg gaggctagtt tgtccaaaga aaactcacat 480

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77 accaatgcaa tagtgacaaa aaaaaattcc tccatgccaa ttcaggaaac agaacgcaag      540
W--> 79 ttgtgcttaa gnccatggtn ggggtgtggga agatgttcca anaccgncac cccttaccct      600
W--> 81 cntctatgac tatctncaac ccccnagnann ggggctcgnc agtttgntaa aggggttaat      660
W--> 83 taccannagg gggcntgtcc ccccnagngt cncctggggg gtgananncn anaaaaccnc      720
W--> 85 tntccattta ccaaacaaan acacntccct gggattattn ggggggttnca ggcttttnag      780
W--> 87 ncannttcca ngcctngnt ctgnccctnn tccnnggttg ggaanccatc ccccnngctc      840
W--> 89 ctgattacca atnccnaat cccnnggttg ggttgnattc atctctccca aaatgttngt      900
W--> 91 tggnttcggg gggtnaagan ttt                                     923
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95 <211> LENGTH: 629
96 <212> TYPE: DNA
97 <213> ORGANISM: Homo Sapiens
99 <220> FEATURE:
100 <221> NAME/KEY: modified_base
101 <222> LOCATION: (1)..(629)
102 <223> OTHER INFORMATION: n = a, c, g or t
105 <400> SEQUENCE: 3
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108 acctactctg gagcacgggtg tcttccttct aaactgagtg actgtagtac tatctgtgcc      120
110 tctgatggta ataaaactga caagatgtct aatttttttt taagtaggac caaaggaaaa      180
112 caagatttag atagtctgac tttgcttttg aacaacagac attgcaagtc aaaattgttg      240
114 tcaaatttac atatggtaaa tgatgaactt taaaaatgtg tccagggtgt agatgagttc      300
116 attagactct tttaatgcta atggctagta ccgtttaaac aaaacagcag ttctctgctg      360
118 caatattccc attgaccact taaatgacca taagtgtgca ttttaagaaca tgtaggggtt      420
120 agccctgatc tgaatataaa agtgagaaaa gggctacagt gcatttcttg gtaacttaaa      480
W--> 122 ctgagtcctg aagttataat gatccattcg agttcngtga tccttattgg tcctaattgg      540
W--> 124 ggttcccnac cgtattggta cagatgagcc atacgttccc ttggtaccat gtagacatga      600
W--> 126 cttcagatac cctgaggac ctncacgca                                     629
129 <210> SEQ ID NO: 4
130 <211> LENGTH: 448
131 <212> TYPE: DNA
132 <213> ORGANISM: Homo Sapiens
134 <220> FEATURE:
135 <221> NAME/KEY: modified_base
136 <222> LOCATION: (1)..(448)
137 <223> OTHER INFORMATION: n = a, c, g or t
140 <400> SEQUENCE: 4
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143 gagggagaat agaagcccaa gactaagatt ctcaaaatgg ttattaccc agaactcttt      120
145 gtctgggtca gtcaagaacc gtttccaaac aaggacatgg agggaaggct tcctaaggga      180
W--> 147 agacttctg tcccaaagga agtgagccgc aagaagaacg atnagacaaa cgctgcctcc      240
149 ctgactccac tgggcagcag tgaactccgc tcccacagaa tcagttacct ccaacttttt      300
151 taatcgtaac acctccattt gtattacata tgggtgatgg gtattgatga ggtcatggta      360
153 tcatatatgg gatttttttc tgtgtaaatc atcaagtata agaagaaact atgggactct      420
W--> 155 ggccttgct tttagaant tacagtgg                                     448
158 <210> SEQ ID NO: 5
159 <211> LENGTH: 460
160 <212> TYPE: DNA
161 <213> ORGANISM: Homo Sapiens

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163 <220> FEATURE:
164 <221> NAME/KEY: modified_base
165 <222> LOCATION: (1)..(460)
166 <223> OTHER INFORMATION: n = a, c, g or t
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172 acgctgtcgg cattgccagc ctggsawttt ccgatgccgg gacragaagt gcgtgtatga      120
174 gacrtgggtg tgcgawgggc acccaaactg tgcggacggc artgatsagt gggactgctc      180
176 ctatgtttctg ccccgcaagg tcattacagc tgcagtcatt ggcagcctas tgtgcggmct      240
178 gctcctgkic atcgccctgg gctgcacctg cwwgctctat gccattcgca ccagggagta      300
180 cagcatcttt gccccctct cccggatgga ggctgagatt gtgcatcaac aggcaccccc      360
182 ttcctacggg cagctcattg cccaaggtgc catcccacct gtagaatact ttcctacaga      420
184 gaatccta at gataactcag tgcctgggcaa cctgcgttct      460
187 <210> SEQ ID NO: 6
188 <211> LENGTH: 446
189 <212> TYPE: DNA
190 <213> ORGANISM: Homo Sapiens
192 <220> FEATURE:
193 <221> NAME/KEY: modified_base
194 <222> LOCATION: (1)..(446)
195 <223> OTHER INFORMATION: n = a, c, g or t
198 <400> SEQUENCE: 6
199 atcacaaatcc agtgcaaaca taatcacaaa ttgcatctct ggcacatctg gtgcttttag      60
201 cttctgcaca aattcaacat ggtaaccctc acagcattct agggcataaa aggggtcaagt      120
203 acaataaata tccacygtaa gtggtcataa ggaagaaaat caccctgcca cacagtcaga      180
205 atgttttccc ttcagctckc cctaccgttg agaagcgcta taaaaggagg ctttakcstc      240
207 ctctaaagtt taccattata ttactaaaa gccaccacct tgataaagtt actaaagcca      300
209 agatgggtta caaagttaga taagttcatt aaattcaact ccccaaacia ttacgtttat      360
211 ctatgatgcc taggcgagaa aggcctgtga atctataasg taggagaatg gggaaactaag      420
213 atttttaggcc ttaaaatatg ttggaa      446
216 <210> SEQ ID NO: 7
217 <211> LENGTH: 295
218 <212> TYPE: DNA
219 <213> ORGANISM: Homo Sapiens
221 <220> FEATURE:
222 <221> NAME/KEY: modified_base
223 <222> LOCATION: (1)..(295)
224 <223> OTHER INFORMATION: n = a, c, g or t
227 <400> SEQUENCE: 7
228 ccgtcactag gctgccagaa gatcctccaa ggagccatcc cagacccagt gatctgctgc      60
230 cactcacatt gtggcagtga cacttccaaa gcagctattg tattctggag cctcctggat      120
232 gaacatcagc tttatcacct ggagcctgtt acaaacgtag aatcttgacc tcagcccagc      180
234 cctactgaat cagagtctac atttttaatg agatccccaan gtgattcgca agcacatgag      240
236 agtttgagaa gtgctgtctg gttacttatg gcagccta at gacggtaatc gaatt      295
239 <210> SEQ ID NO: 8
240 <211> LENGTH: 507
241 <212> TYPE: DNA
242 <213> ORGANISM: Homo Sapiens
244 <220> FEATURE:

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245 <221> NAME/KEY: modified_base
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247 <223> OTHER INFORMATION: n = a, c, g or t
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W--> 253 ctgctttact atgcacacac agcttaactc tccaaccgtg gagaacaact aactctatan      120
W--> 255 gaaaaatnaa aagntaaact naaccatcca aggatggggg naagggcttc atgggtaact      180
W--> 257 tctggcctgt nagcactaaa ttncaaactg ctctgcaag aaacctnaag ggctgggaag      240
W--> 259 gctttatctg gctcaaaaac taaggntgct ctcnaaagaa ttcaaattct cctcaacaan      300
W--> 261 cnanaaanan tkgtcaatcc aattcaaggc tccntnana ttgnaagnan ttctntnaa      360
W--> 263 caacaacaag gtgactkact ytkcaacaa tytaaattcc cccggcsncc atggggggcn      420
W--> 265 ggaaanatss aantntnggc ccaatttccc canaatkagt cttataaaaa tcacwgggcg      480
W--> 267 tctttaaang tctkactggg naaaaac      507
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271 <211> LENGTH: 256
272 <212> TYPE: DNA
273 <213> ORGANISM: Homo Sapiens
275 <220> FEATURE:
276 <221> NAME/KEY: modified_base
277 <222> LOCATION: (1)..(256)
278 <223> OTHER INFORMATION: n = a, c, g or t
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284 ggcattttta cactgcgctt caggaaatct caagttccat cttgtgttag taacgtaccc      120
286 acattttgct ggagttagtt tattaaagat gcctacggtg aactctcttg cgcaggttaa      180
288 atgcagtttt gaaaacctgg aaacatcaaa tggaggcggg aaataagctg gggccgagct      240
290 gaggggctga acacga      256
293 <210> SEQ ID NO: 10
294 <211> LENGTH: 336
295 <212> TYPE: DNA
296 <213> ORGANISM: Homo Sapiens
298 <220> FEATURE:
299 <221> NAME/KEY: modified_base
300 <222> LOCATION: (1)..(336)
301 <223> OTHER INFORMATION: n = a, c, g or t
304 <400> SEQUENCE: 10
305 ttgtgcttaa aaaaataggc ttctcagtg aagcacctga taaamttagg tggttggatt      60
307 acagtggaaa gtccacttta cacacacaca caaacacaca aaaactggcg actttttcca      120
309 tccccaatcc ctgcamtgst gagacacaaa atgagttttw tggcaaagga tccttaatcc      180
311 ccagagacgc tttggcttgt ggtgcttttt tttttaaggc ctctctgctc tgcccggtag      240
313 catgggtcga acgaggggtg tataaaatgg gggccttggg aagcctccac ggtacagggc      300
315 tgcaggcccc tcagatgtga acacgacgac ctggga      336
318 <210> SEQ ID NO: 11
319 <211> LENGTH: 442
320 <212> TYPE: DNA
321 <213> ORGANISM: Homo Sapiens
323 <220> FEATURE:
324 <221> NAME/KEY: modified_base
325 <222> LOCATION: (1)..(442)

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326 <223> OTHER INFORMATION: n = a, c, g or t
 329 <400> SEQUENCE: 11
 330 tgtcagggat accgagagcc ggtgttctgt taacctctgg gaatggtcct cccaatccta 60
 332 ggccagttgg cctgggcccc ggaccaaacc ccaatctgag atcaggcttt ttagggacaa 120
 334 accctgcccc caggtcaggt gtgtttccag gcccaggcct tgggccaac ccaagaccaa 180
 W--> 336 gtggcctggg cccaggccct aatctanatr ccagagcagg tggcctcttg ggcacaggat 240
 338 ctggtcttaa cttaagaatg gctggacctc aaggcctcga tcttgcccc attctaagag 300
 340 cagcaggtct tttaggagca aattcagctt ctttctcaca ggcttctgga aacatgggca 360
 W--> 342 caagcccatc ctccatggca agagtacctg gccccatggg cccaaactcg ggtcctanct 420
 344 ctcggtatcc ctgacaatcg aa 442
 347 <210> SEQ ID NO: 12
 348 <211> LENGTH: 310
 349 <212> TYPE: DNA
 350 <213> ORGANISM: Homo Sapiens
 352 <220> FEATURE:
 353 <221> NAME/KEY: modified_base
 354 <222> LOCATION: (1)..(310)
 355 <223> OTHER INFORMATION: n = a, c, g or t
 358 <400> SEQUENCE: 12
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 361 ggttggaaca ctggctccat aaagaggaag tcaacttaacc ttctctgggg catggtttct 120
 363 tcatctgttc ccacctctga agactatcgt aagacagaat gaaagttaag caacttaacg 180
 365 caacgcccag gataccagaa ttattctaaa tggcagaatc ctacttagtc tgtcatcttg 240
 367 ggagttctct aggcaggcag gttgccaggg gtggggctga gatccagatg tgctctcgg 300
 369 atccctgaca 310
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 373 <211> LENGTH: 536
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 375 <213> ORGANISM: Homo Sapiens
 377 <220> FEATURE:
 378 <221> NAME/KEY: modified_base
 379 <222> LOCATION: (1)..(536)
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 W--> 386 ccctaagata nagganacac ctgctaggtg taaggagaan atgggttaggt ctacggaggc 120
 W--> 388 tccagggtgg gagtanttcc ctgctaaggg agggtaaact gttcaacctg ttctgtctcc 180
 W--> 390 ggcctcmact ataccaawtg cnaccaggat taggaaaaag gggggtaana tcaaacctt 240
 W--> 392 atntntntta tgcggggaaa cnccatatcg ggggcaccka ttattagggg aactattcat 300
 W--> 394 ttccaaancc nccgattatg atgggtatta ctatgaanaa natittacaa atgcatgggc 360
 W--> 396 tgtgacaana acnttrtaaa tttgsnctta ccnaaaangt tncctgggyt ggcccanctc 420
 W--> 398 ggctcnaaaa angagkctaa aacttttctt aagacnccac ctcatgcccc naaaaaaaag 480
 W--> 400 tanagtnttc caattttttt gtggnntgka aaaaaaaatc aacggtcggg aaaawy 536
 403 <210> SEQ ID NO: 14
 404 <211> LENGTH: 494
 405 <212> TYPE: DNA
 406 <213> ORGANISM: Homo Sapiens
 408 <220> FEATURE:
 409 <221> NAME/KEY: modified_base

→ Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

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L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1
L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:67 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:71 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:73 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:75 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:79 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:81 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:83 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:85 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:87 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:89 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:91 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:122 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:126 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:155 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:251 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:253 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
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L:263 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:265 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:267 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:388 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
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L:415 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:421 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:423 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:429 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:446 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:495 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:497 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:499 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16

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L:516 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17